## IAP7 Rec'd PCT/PTO 28 JUL 2006'

PTO-1390 (Rev. 02-2005)

Approved for use through 03/31/2007. OMB 0651-0021

U. S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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## TRANSMITTAL LETTER TO THE UNITED STATES **DESIGNATED/ELECTED OFFICE (DO/EO/US)**

ATTORNEY'S DOCKET NUMBER K0181.70024US00

| CON   | ICERNING A SUBMISSION   | U.S. APPLICATION NO. (If known, see 37 CFR 1.5) |                                   |  |  |  |  |  |  |  |  |
|---|---|---|-----------------------------------|--|--|--|--|--|--|--|--|
| INTERNA   | TIONAL APPLICATION NO.  | INTERNATIONAL FILING DATE                       | PRIORITY DATE CLAIMED             |  |  |  |  |  |  |  |  |
|   | PCT/GB2005/000257   | 28 January 2004 (28.01.2004)                    |                                   |  |  |  |  |  |  |  |  |
| PCT/GB2005/000257 26 January 2005 (26.01.2005) 28 January 2004 (28.01.2004)  TITLE OF INVENTION SURFACE DOPED PARTICLES OF TI02 OR ZNO AND THEIR USE                  |   |   |                                   |  |  |  |  |  |  |  |  |
| APPLICANT(S) FOR DO/EO/US WAKEFIELD, Gareth; PARK, Barry George; LIPSCOMB, Sarah; HOLLAND, Edward   |   |   |                                   |  |  |  |  |  |  |  |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:                                       |   |   |                                   |  |  |  |  |  |  |  |  |
| 1. X This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.   |   |   |                                   |  |  |  |  |  |  |  |  |
| 2.  | This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.   |   |                                   |  |  |  |  |  |  |  |  |
| 3. This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below. |   |   |                                   |  |  |  |  |  |  |  |  |
| 4.  | The US has been elected (Article 31).   |   |                                   |  |  |  |  |  |  |  |  |
| 5. X  | A copy of the International Application as filed (35 U.S.C. 371 (c)(2))   |   |                                   |  |  |  |  |  |  |  |  |
| а.  | is attached hereto (required only if not communicated by the International Bureau).   |   |                                   |  |  |  |  |  |  |  |  |
| b.  | X has been communicated by the International Bureau.  |   |                                   |  |  |  |  |  |  |  |  |
| c.  | is not required, as the application was filed in the United States Receiving Office (RO/US).  |   |                                   |  |  |  |  |  |  |  |  |
| 6.  | An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).   |   |                                   |  |  |  |  |  |  |  |  |
| a.  | is attached hereto.   |   |                                   |  |  |  |  |  |  |  |  |
| b. [  | has been previously submitt   | ed under 35 U.S.C. 154(d)(4).                   | •                                 |  |  |  |  |  |  |  |  |
| 7. X  | Amendments to the claims of the   | e International Application under PCT A         | Article 19 (35 U.S.C. 371 (c)(3)) |  |  |  |  |  |  |  |  |
| a.  | are attached hereto (required only if not communicated by the International Bureau).  |   |                                   |  |  |  |  |  |  |  |  |
| b.  | have been communicated by the International Bureau.   |   |                                   |  |  |  |  |  |  |  |  |
| c.  | have not been made; however, the time limit for making such amendments has NOT expired.   |   |                                   |  |  |  |  |  |  |  |  |
| d.  | X have not been made and will not be made.  |   |                                   |  |  |  |  |  |  |  |  |
| 8.  | An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).                                    |   |                                   |  |  |  |  |  |  |  |  |
| 9   | An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).   |   |                                   |  |  |  |  |  |  |  |  |
| 10.   | An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)). |   |                                   |  |  |  |  |  |  |  |  |
| Items 1   | 1 to 20 below concern docum   | nent(s) or information included:                |                                   |  |  |  |  |  |  |  |  |
| 11. X   | An Information Disclosure State   | ment under 37 CFR 1.97 and 1.98.                |                                   |  |  |  |  |  |  |  |  |
| 12.   | An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3,28 and 3.31 is included.                               |   |                                   |  |  |  |  |  |  |  |  |
| 13. X   | A preliminary amendment.  |   |                                   |  |  |  |  |  |  |  |  |
| 14. X   | An Application Data Sheet under 37 CFR 1.76.  |   |                                   |  |  |  |  |  |  |  |  |
| 15.   | A substitute specification.   |   |                                   |  |  |  |  |  |  |  |  |
| 16.   | A power of attorney and/or change of address letter.  |   |                                   |  |  |  |  |  |  |  |  |
| 17.   | A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.                                  |   |                                   |  |  |  |  |  |  |  |  |
| 18.   | A second copy of the published International Application under 35 U.S.C. 154(d)(4).   |   |                                   |  |  |  |  |  |  |  |  |
| 19.   | A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).                                   |   |                                   |  |  |  |  |  |  |  |  |
| 20. X   | Application   |   |                                   |  |  |  |  |  |  |  |  |
| Express Mail No:EV716304936US Application .   |   |   |                                   |  |  |  |  |  |  |  |  |
|   |   |   |                                   |  |  |  |  |  |  |  |  |

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DATE OF MAILING: \_\_\_\_\_\_28 July\_2006\_\_\_\_\_

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## IAP5 Rec'd PCT/PTO 28 JUL 2006

PTO-1390 (Rev. 02-2005) Approved for use through 03/31/2007. OMB 0651-0021

| U.S. APPLICATION NO. Of Lown See 207 151 / INTERNATIONAL APPLICATION NO. PCT/GB2005/000257  |                                       |  |                                       |              |                   | ATTORNEY'S DOCKET NUMBER: K0181.70024US00 |                         |              |  |
|---|---------------------------------------|--|---------------------------------------|--------------|-------------------|---|-------------------------|--------------|--|
| The following fees have been submitted  |                                       |  |                                       |              |                   |   | CALCULATIONS            | PTO USE ONLY |  |
| 21. X Basic nation  | onal fee (37 CFR                      | 1.492(a))                                |                                       | •••••        | \$300             | \$  | 300.00                  |              |  |
| 22. X Examination   | on fee (37 CFR 1.                     | .492(c))                                 |                                       |              |                   |   |                         |              |  |
| If the written opinion pre  |                                       |  |                                       |              |                   |   |                         |              |  |
| report prepared by IPE All other situations   | AVUS Indicates all CI                 | \$                                       | 200.00                                | [ · ]        |                   |   |                         |              |  |
| 23. X Search fee  | e (37 CFR 1.492(                      | (b))                                     | <del></del>                           |              |                   |   |                         |              |  |
| If the written opinion of   |                                       |  |                                       |              |                   |   |                         |              |  |
| Search fee (37 CFR 1.4  |                                       |  |                                       | ]            |                   |   |                         |              |  |
| Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority |                                       |  |                                       |              |                   |   | !                       | 1            |  |
|   | nmunicated to the US                  | S by the IB                              |                                       | •••••        | \$400             | \$  | 400.00                  |              |  |
|   | TOTAL OF 21, 22                       |  | · · · · · · · · · · · · · · · · · · · |              |                   | \$  | 900.00                  |              |  |
| Additional fee fo   | r specification and d                 | drawings filed                           | d in paper over 100 s                 |              |                   |   | i                       |              |  |
| <del></del>   | <del> </del>                          | Number of each additional 50 or fraction |                                       |              | RATE              |   |                         |              |  |
| - 100 =   | /50 = .                               | thereot (ro                              | ound up to a whole nu                 | umber        | × \$250.00        | 1   | 0.00                    |              |  |
| Surcharge of \$130.00 for   | ·                                     | or declarati                             | on later than 30 mon                  | ths          |                   | ┟╴  | 0.00                    |              |  |
| from the earliest claimed p   | priority date (37 CFR 1               | 1.492 (e)).                              |                                       | <del></del>  |                   | <b> </b>                                  | ····                    | <u> </u>     |  |
| CLAIMS Total claims   | NUMBER FILE<br>64 - 20                |  | JMBER EXTRA                           |              | SO OO             | <del> </del>                              | 2200.00                 | <del></del>  |  |
| Total claims Independent claims   | 7 - 3                                 |  | 44                                    | X            | 50.00<br>200.00   | \$<br>\$                                  | 2200.00<br>800.00       |              |  |
| MULTIPLE DEPENDE  | <u> </u>                              |  |                                       | +            | 360.00            | \$  | 0.00                    | <b>†</b>     |  |
|   |                                       |  | TOTAL OF ABOVE                        | E CALCUL     |                   | \$  | 3000.00                 |              |  |
| Applicant claims  | small entity status                   | . See 37 C                               | FR 1.27. Fees abo                     | ve are redu  | iced by 1/2.      | \$  |                         |              |  |
|   |                                       |  |                                       | SUE          | BTOTAL =          | \$  | 3900.00                 |              |  |
| Processing fee of \$13  | _                                     | _  |                                       | in 30 month  | hs +              | \$  | \$                      |              |  |
| from the earliest claim   | ed priority date (or                  | UFR 1.432                                |                                       | AL NATION    |                   | <del> </del>                              | \$ 3900.00              |              |  |
| Fee for recording the e   | <br>nclosed assignmer                 | nt (37 CFR 1                             |                                       |              |                   | To the                                    | <b>C</b>                |              |  |
| accompanied by an ap  |                                       | -  | 3.28, 3.31). \$40.00                  | per propert  | ty                | Φ 2000 00                                 |                         |              |  |
|   |                                       |  | TOTAL                                 | FEES ENC     | CLOSED =          | \$ 3900.00<br>Amount to be                |                         |              |  |
|   |                                       |  |                                       |              |                   | re  | funded:                 | \$           |  |
|   |                                       |  |                                       |              |                   |   | mount to be<br>narged:  | \$           |  |
| a. X A check in   | the amount of                         | \$                                       | 3900.0                                | to cover th  | ne above fees     | is e                                      | enclosed.               |              |  |
|   |                                       | 2  | 22/28′                                | re j         | - the emount      | ~f  | <b>₽</b>                |              |  |
| 1 10000 01  | arge my Deposit A<br>ne above fees. A |  | copy of this sheet is                 |              | n the amount      | ÜI  | <b>D</b>                |              |  |
|   |                                       | •  |                                       |              |                   | v be                                      | e required, or credit a | inv          |  |
| <u> </u>  | ent to Deposit Acc                    |  | _                                     |              | _                 | _   | is sheet is enclosed.   | •••          |  |
|   | ·                                     |  |                                       | <del></del>  | •                 |   | become public. Cred     | dit card     |  |
|   | •                                     |  |                                       |              |                   | -   | and authorization or    |              |  |
| NOTE: Where an appr   | ropriate time limit ι                 | under 37 CF                              | R 1.495 has not bee                   | en met, a pe | atition to revive |   | 7 CFR 1.137 (a) or (b)) |              |  |
| must be filed and gra   |                                       |  | ial Application to pe                 | ending statu | Ma R.             | 1,  | Par In atu              | 1            |  |
| Wolf, Greenfield & Sacks, P.C.  Signature:  |                                       |  |                                       |              |                   |   |                         |              |  |
| 600 Atlantic Avenue<br>Boston, Massachus  | etts 02210-2206                       | ۱M,                                      | John R.                               |              |                   |   |                         |              |  |
| Tel. (617) 646-8000   |                                       |  |                                       |              |                   |   |                         |              |  |
| CUSTOMER NUI  | MBER:                                 | 23628                                    |                                       | NAME<br>40,2 | \                 |   |                         |              |  |
|   | 1BER                                  |  |                                       |              |                   |   |                         |              |  |
|   |                                       |  |                                       |              |                   |   |                         |              |  |